FortiManager - Release Notes

Version 5.6.4

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FortiManager 5.6.4 Release Notes
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Change Log

Date	Change Description
2018-05-16	Initial release of 5.6.4.
2018-05-17	Added 489721 to *Known Issues* > *Revision History*.
2018-06-05	Added 450434 to *Resolved Issues* > *AP Manager*.

Introduction

This document provides the following information for FortiManager 5.6.4 build 1678:

For more information on upgrading your device, see the FortiManager *Upgrade Guide*.

Supported models

FortiManager version 5.6.4 supports the following models:

FortiManager	FMG-200D, FMG-200F, FMG-300D, FMG-300E, FMG-400E, FMG-1000D, FMG-2000E, FMG-3000F, FMG-3900E, FMG-4000D, and FMG-4000E.
FortiManager VM	FMG-VM64, FMG-VM64-AWS, FMG-VM64-Azure, FMG-VM64-HV (including Hyper-V 2016), FMG-VM64-KVM, and FMG-VM64-XEN (for both Citrix and Open Source Xen).

Minimum screen resolution

The recommended minimum screen resolution is 1280 x 800. Please adjust the screen resolution accordingly. Otherwise, the GUI may not display properly.

Special Notices

This section highlights some of the operational changes that administrators should be aware of in 5.6.4.

FortiAP Manager per-device management option

FortiAP Manager now supports a new per-device AP management option. When this option is enabled, the WiFi settings are managed at each FortiGate device level. The Central WiFi settings of the ADOM are not applied to the per-device managed APs.

Traffic Shaping Policies

Starting from FortiManager 5.6.0, configuration for traffic shaping policies has been moved from individual FortiGate devices (the device database) to the ADOM database Policy Package. For FortiManager units that are upgraded from a previous release, a one-time operation of Importing all traffic shaping policies into the ADOM must performed (a one-time manual or scripted reconfiguration can also be performed). Otherwise, the FortiManager will delete (purge) all existing traffic shaping policies on the FortiGate when installing the original policy package.

WebSocket Implementation

As of version 5.6.0, WebSocket protocol has been implemented to allow for more efficient communication between the FortiManager and the browser. WebSocket protocol uses the standard TCP 80/443 browser ports, and is transparent to the operator. If your browser is using a proxy to access the FortiManager, ensure there are no limitations or restrictions on the using WebSocket.

Virtual Wire Pair Support after Upgrade to 5.6.2 or Later

FortiManager 5.6.2 or later supports Virtual Wire Pair policies. After you upgrade FortiManager, you should import all policies and objects again from FortiGate units that use Virtual Wire Pair policies. Otherwise, a subsequent install may delete all policies on FortiGate units that reference a Virtual Wire Pair.

FortiGate VM 16/32/UL license support

FortiOS 5.4.4 introduces new VM license types to support additional vCPUs. FortiManager 5.6.0 supports these new licenses with the prefixes of FGVM16, FGVM32, and FGVMUL.

Hyper-V FortiManager-VM running on an AMD CPU

A Hyper-V FMG-VM running on a PC with an AMD CPU may experience a kernel panic. Fortinet recommends running VMs on an Intel-based PC.

IPsec connection to FortiOS for logging

FortiManager 5.4.2 and later does not support an IPsec connection with FortiOS 5.0/5.2. However UDP or TCP + reliable are supported.

Instead of IPsec, you can use the FortiOS reliable logging feature to encrypt logs and send them to FortiManager. You can enable the reliable logging feature on FortiOS by using the `configure log fortianalyzer setting` command. You can also control the encryption method on FortiOS by using the `set enc-algorithm default/high/low/disable` command.

VM License (VM-10K-UG) Support

FortiManager 5.4.2 introduces a new VM license (VM-10K-UG) that supports 10,000 devices. It is recommended to upgrade to FortiManager 5.4.2 or later before applying the new license to avoid benign GUI issues.

System Configuration or VM License is Lost after Upgrade

When upgrading FortiManager from 5.4.0 or 5.4.1 to 5.4.x or 5.6.0, it is imperative to reboot the unit before installing the 5.4.x or 5.6.0 firmware image. Please see the *FortiManager Upgrade Guide* for details about upgrading. Otherwise, FortiManager may lose system configuration or VM license after upgrade. There are two options to recover the FortiManager unit:

1. Reconfigure the system configuration or add VM license via CLI with `execute add-vm-license <vm license>`.
2. Restore the 5.4.0 backup and upgrade to 5.4.2.

FortiOS 5.4.0 Support

With the enhancement in password encryption, FortiManager 5.4.2 and later no longer supports FortiOS 5.4.0. Please upgrade FortiGate to 5.4.2 or later.

The following ADOM versions are not affected: 5.0 and 5.2.

Local in-policy after upgrade

After upgrading to FortiManager 5.4.1 or later, you must import or reconfigure local in-policy entries. Otherwise, the subsequent install of policy packages to FortiGate will purge the local in-policy entries on FortiGate.

ADOM for FortiGate 4.3 Devices

FortiManager 5.4 and later no longer supports FortiGate 4.3 devices. FortiManager cannot manage the devices after the upgrade. To continue managing those devices, please upgrade all FortiGate 4.3 to a supported version, retrieve the latest configuration from the devices, and move the devices to an ADOM database with the corresponding version.

SSLv3 on FortiManager-VM64-AWS

Due to known vulnerabilities in the SSLv3 protocol, FortiManager-VM64-AWS only enables TLSv1 by default. All other models enable both TLSv1 and SSLv3. If you wish to disable SSLv3 support, please run:

```
config system global
set ssl-protocol t1sv1
end
```

Port 8443 reserved

Port 8443 is reserved for `https-logging` from FortiClient EMS for Chromebooks.

Upgrade Information

Upgrading to FortiManager 5.6.4

You can upgrade FortiManager 5.4.0 or later directly to 5.6.4. If you are upgrading from versions earlier than 5.4.x, you should upgrade to the latest patch version of FortiManager 5.4 first.

When upgrading from FortiManager 5.4 or 5.6.0 to 5.6.1, it is required to run the following CLI for proper rendering of GUI pages:

```
diagnose cdb upgrade force-retry resync-dbcache
```

When upgrading from FMG 5.2, an *Import Policy Package* should be performed on all FortiGates using *Local-In-Polices*. As of FMG 5.4, these are handled in Policies & Objects.

During upgrade from 5.2.4 or earlier, invalid dynamic mappings and duplicate package settings are removed from the ADOM database. Please allow sufficient time for the upgrade to complete.

For details about upgrading your FortiManager device, see the *FortiManager Upgrade Guide*.

Upgrading from 5.2.x

Starting with FortiManager 5.4.0, you can create a maximum number of Global and ADOM objects for each object category, and the maximum is enforced. The maximum numbers are high and unlikely to be met. The purpose of the maximum is to help avoid excessive database sizes, which can impact performance.

During upgrade from FortiManager 5.2.x to 5.4.x to 5.6.4, objects are preserved, even if the 5.2 ADOM contains more than the maximum number of allowed objects. If you have met the maximum number of allowed objects, you cannot add additional objects after upgrading to FortiManager 5.6.4.

Following are examples of object limits:

- Firewall service custom: 8192 objects
- Firewall service group: 2000 objects

If you have reached the maximum number of allowed objects, you can reduce the number of objects by deleting duplicate or obsolete objects from the ADOM.

You can also reach the maximum number of allowed objects if you have multiple FortiGate/VDOMs in the same ADOM. You can reduce the number of objects by moving the FortiGates/VDOMs into different ADOMs.

Downgrading to previous firmware versions

FortiManager does not provide a full downgrade path. You can downgrade to a previous firmware release via the GUI or CLI, but doing so results in configuration loss. A system reset is required after the firmware downgrading process has completed. To reset the system, use the following CLI commands via a console port connection:

```
execute reset {all-settings | all-except-ip}
execute format {disk | disk-ext4 | disk-ext3}
```

FortiManager VM firmware

Fortinet provides FortiManager VM firmware images for Amazon AWS, Citrix and Open Source XenServer, Linux KVM, Microsoft Hyper-V Server, and VMware ESX/ESXi virtualization environments.

Amazon Web Services

- The 64-bit Amazon Machine Image (AMI) is available on the AWS marketplace.

Citrix XenServer and Open Source XenServer

- `.out`: Download the 64-bit firmware image to upgrade your existing FortiManager VM installation.
- `.out.OpenXen.zip`: Download the 64-bit package for a new FortiAnalyzer VM installation. This package contains the QCOW2 file for the Open Source Xen Server.
- `.out.CitrixXen.zip`: Download the 64-bit package for a new FortiManager VM installation. This package contains the Citrix XenServer Virtual Appliance (XVA), Virtual Hard Disk (VHD), and OVF files.

Linux KVM

- `.out`: Download the 64-bit firmware image to upgrade your existing FortiManager VM installation.
- `.out.kvm.zip`: Download the 64-bit package for a new FortiManager VM installation. This package contains QCOW2 that can be used by qemu.

Microsoft Azure

The files for Microsoft Azure have AZURE in the filenames, for example `FMG_VM64_AZURE-v<number>-build<number>-FORTINET.out.hyperv.zip`.

- `.out`: Download the firmware image to upgrade your existing FortiManager VM installation.
- `.hyperv.zip`: Download the package for a new FortiManager VM installation. This package contains a Virtual Hard Disk (VHD) file for Microsoft Azure.

Microsoft Hyper-V Server

The files for Microsoft Hyper-V Server have HV in the filenames, for example, `FMG_VM64_HV-v<number>-build<number>-FORTINET.out.hyperv.zip`.

- `.out`: Download the firmware image to upgrade your existing FortiManager VM installation.
- `.hyperv.zip`: Download the package for a new FortiManager VM installation. This package contains a Virtual Hard Disk (VHD) file for Microsoft Hyper-V Server.

Microsoft Hyper-V 2016 is supported.

VMware ESX/ESXi

- `.out`: Download the 64-bit firmware image to upgrade your existing VM installation.
- `.ovf.zip`: Download either the 64-bit package for a new VM installation. This package contains an Open Virtualization Format (OVF) file for VMware and two Virtual Machine Disk Format (VMDK) files used by the OVF file during deployment.

For more information see the FortiManager product data sheet available on the Fortinet web site, http://www.fortinet.com/products/fortimanager/virtualappliances.html. VM installation guides are available in the Fortinet Document Library.

Firmware image checksums

The MD5 checksums for all Fortinet software and firmware releases are available at the Customer Service & Support portal, https://support.fortinet.com. After logging in select *Download* > *Firmware Image Checksums*, enter the image file name including the extension, and select *Get Checksum Code*.

SNMP MIB files

You can download the *FORTINET-FORTIMANAGER-FORTIANALYZER.mib* MIB file in the firmware image file folder. The Fortinet Core MIB file is located in the main FortiManager version 5.00 file folder.

Product Integration and Support

FortiManager 5.6.4 support

The following table lists 5.6.4 product integration and support information:

Web Browsers	• Microsoft Internet Explorer version 11 or Edge 40 Due to limitation on Microsoft Internet Explorer or Edge, it may not completely render a page with a large set of policies or objects. • Mozilla Firefox version 59 • Google Chrome version 66 Other web browsers may function correctly, but are not supported by Fortinet.

FortiOS/FortiOS Carrier	• 5.6.4 • 5.6.2 to 5.6.3 FortiManager 5.6.4 is fully tested as compatible with FortiOS/FortiOS Carrier 5.6.2, with some minor interoperability issues. For information, see Compatibility issues with FortiOS 5.6.3 on page 24. • 5.6.0 to 5.6.1 FortiManager 5.6.4 is fully tested as compatible with FortiOS/FortiOS Carrier 5.6.0 to 5.6.1, with some minor interoperability issues. For information, see Compatibility issues with FortiOS 5.6.0 and 5.6.1 on page 24. • 5.4.9 FortiManager 5.6.4 is fully tested as compatible with FortiOS/FortiOS Carrier 5.4.9, with some minor interoperability issues. For information, see Compatibility issues with FortiOS 5.4.9 on page 24. • 5.4.1 to 5.4.8 FortiManager 5.6.4 is fully tested as compatible with FortiOS/FortiOS Carrier 5.4.8, with some minor interoperability issues. For information, see Compatibility issues with FortiOS 5.4.8 on page 24. • 5.2.8 to 5.2.13 FortiManager 5.6.4 is fully tested as compatible with FortiOS/FortiOS Carrier 5.2.10, with some minor interoperability issues. For information, see Compatibility issues with FortiOS 5.2.10 on page 25. • 5.2.7 FortiManager 5.6.4 is fully tested as compatible with FortiOS/FortiOS Carrier 5.2.7, with some minor interoperability issues. For information, see Compatibility issues with FortiOS 5.2.7 on page 25. • 5.2.6 FortiManager 5.6.4 is fully tested as compatible with FortiOS/FortiOS Carrier 5.2.6, with some minor interoperability issues. For information, see Compatibility issues with FortiOS 5.2.6 on page 25. • 5.2.2 to 5.2.5 • 5.2.1 FortiManager 5.6.4 is fully tested as compatible with FortiOS/FortiOS Carrier 5.2.1, with some minor interoperability issues. For information, see Compatibility issues with FortiOS 5.2.1 on page 25. • 5.2.0 FortiManager 5.6.4 is fully tested as compatible with FortiOS/FortiOS Carrier 5.2.0, with some minor interoperability issues .For information, see Compatibility issues with FortiOS 5.2.0 on page 26.
FortiAnalyzer	• 5.6.0 to 5.6.4 • 5.4.0 to 5.4.4 • 5.2.0 to 5.2.10 • 5.0.0 to 5.0.13

FortiCache	• 4.2.7 • 4.1.6 • 4.0.0 to 4.0.4
FortiClient	• 5.6.0 to 5.6.6 • 5.4.0 and later • 5.2.0 and later
FortiMail	• 5.4.5 • 5.3.12 • 5.2.10 • 5.1.7 • 5.0.10 Limited support. For more information, see Feature support on page 16.
FortiSandbox	• 2.5.2 • 2.4.1 • 2.3.3 • 2.2.2 • 2.1.2 • 1.4.0 and later • 1.3.0 • 1.2.0 and 1.2.3
FortiSwitch	• 5.2.5
FortiWeb	• 5.9.1 • 5.8.6 • 5.7.2 • 5.6.1 • 5.5.6 • 5.4.1 • 5.3.9 • 5.2.4 • 5.1.4 • 5.0.6
FortiDDoS	• 4.5.0 • 4.4.2 • 4.3.2 • 4.2.3 • 4.1.12 Limited support. For more information, see Feature support on page 16.
FortiAuthenticator	• 5.2.2

Virtualization	• Amazon Web Service AMI, Amazon EC2, Amazon EBS
	• Citrix XenServer 6.2
	• Linux KVM Redhat 6.5
	• Microsoft Azure
	• Microsoft Hyper-V Server 2008 R2, 2012 & 2012 R2
	• OpenSource XenServer 4.2.5
	• VMware
	  • ESX versions 4.0 and 4.1
	  • ESXi versions 4.0, 4.1, 5.0, 5.1, 5.5, 6.0, and 6.5

To confirm that a device model or firmware version is supported by current firmware version running on FortiManager, run the following CLI command:

```
diagnose dvm supported-platforms list
```

Always review the Release Notes of the supported platform firmware version before upgrading your device.

Feature support

The following table lists FortiManager feature support for managed platforms.

Platform	Management Features	FortiGuard Update Services	Reports	Logging
FortiGate	✓	✓	✓	✓
FortiCarrier	✓	✓	✓	✓
FortiAnalyzer			✓	✓
FortiCache			✓	✓
FortiClient		✓	✓	✓
FortiDDoS			✓	✓
FortiMail		✓	✓	✓
FortiSandbox		✓	✓	✓
FortiSwitch ATCA	✓			
FortiWeb		✓	✓	✓
Syslog				✓

Language support

The following table lists FortiManager language support information.

Language	GUI	Reports
English	✓	✓
Chinese (Simplified)	✓	✓
Chinese (Traditional)	✓	✓
French		✓
Japanese	✓	✓
Korean	✓	✓
Portuguese		✓
Spanish		✓

To change the FortiManager language setting, go to *System Settings* > *Admin* > *Admin Settings*, in *Administrative Settings* > *Language* select the desired language on the drop-down menu. The default value is *Auto Detect*.

Russian, Hebrew, and Hungarian are not included in the default report languages. You can import language translation files for these languages via the command line interface using one of the following commands:

```
execute sql-report import-lang <language name> <ftp> <server IP address> <user name>
      <password> <file name>
execute sql-report import-lang <language name> <sftp <server IP address> <user name>
      <password> <file name>
execute sql-report import-lang <language name> <scp> <server IP address> <user name>
      <password> <file name>
execute sql-report import-lang <language name> <tftp> <server IP address> <file name>
```

For more information, see the *FortiManager CLI Reference*.

Supported models

The following tables list which FortiGate, FortiCarrier, FortiDDoS, FortiAnalyzer, FortiMail, FortiSandbox, FortiSwitch ATCA, FortiWeb, and FortiCache models and firmware versions that can be managed by a FortiManager or send logs to a FortiManager running version 5.6.4.

Software license activated LENC devices are supported, if their platforms are in the supported models list. For example, support of FG-3200D indicates support of FG-3200D-LENC.

FortiGate models

Model	Firmware Version
FortiGate: FG-30D, FG-30D-POE, FG-30E, FG-30E-3G4G-INTL, FG-30E-3G4G-NAM, FG-50E, FG-51E, FG-52E, FG-60D, FG-60D-POE, FG-60E, FG-60E-POE, FG-61E, FG-70D, FG-70D-POE, FG-80C, FG-80CM, FG-80D, FG-80E, FG-80E-POE, FG-81E, FG-81E-POE, FG-90D, FG-90D-POE, FG-90E, FG-91E, FG-92D, FG-94D-POE, FG-98D-POE, FG-100D, FG-100E, FG-100EF, FG-101E, FG-140D, FG-140D-POE, FG-140E, FG-140E-POE, FG-200D, FG-200D-POE, FG-200E, FG-201E, FG-240D, FG-240-POE, FG-280D-POE, FG-300D, FG-300E, FG-301E, FG-400D, FG-500D, FG-500E, FG-501E, FG-600C,FG-600D, FG-800C, FG-800D, FG-900D, FG-1000C, FG-1000D, FG-1200D, FG-1500D, FG-1500DT, FG-2000E, FG-2500E, FG-3000D, FG-3100D, FG-3200D, FG-3240C, FG-3600C, FG-3700D, FG-3700DX, FG-3800D, FG-3810D, FG-3815D, FG-3960E, FG-3980E, **FortiGate 5000 Series:** FG-5001C, FG-5001D **FortiGate DC:** FG-80C-DC, FG-600C-DC, FG-800C-DC, FG-800D-DC, FG-1000C-DC, FG-1500D-DC, FG-3000D-DC, FG-3100D-DC, FG-3200D-DC, FG-3240C-DC, FG-3600C-DC, FG-3700D-DC, FG-3800D-DC, FG-3810D-DC, FG-3815D-DC **FortiGate Low Encryption:** FG-80C-LENC, FG-100D-LENC, FG-600C-LENC, FG-1000C-LENC **FortiWiFi:** FWF-30D, FWF-30D-POE, FWF-30E, FWF-30E-3G4G-INTL, FWF-30E-3G4G-NAM, FWF-50E, FWF-50E-2R, FWF-51E, FWF-60D, FWF-60D-POE, FWF-60E, FWF-61E, FWF-80CM, FWF-81CM, FWF-90D, FWF-90D-POE, FWF-92D **FortiGate VM:** FG-VM64, FG-VM64-AWS, FG-VM64-AWSONDEMAND, FG-VM64-GCP, FG-VM64-HV, FG-VM64-KVM, FG-VM64-XEN, FG-VMX-Service-Manager, FOSVM64, FOSVM64-KVM **FortiGate Rugged:** FGR-30D, FGR-35D, FGR-60D, FGR-90D	5.6

Model	Firmware Version
FortiGate: FG-30D, FG-30D-POE, FG-30E, FG-30E-3G4G-INTL, FG-30E-3G4G-NAM, FG-50E, FG-51E, FG-52E, FG-60D, FG-60D-POE, FG-60E, FG-60E-DSL, FG-60E-POE, FG-61E, FG-70D, FG-70D-POE, FG-80C, FG-80CM, FG-80D, FG-80E, FG-80E-POE, FG-81E, FG-81E-POE, FG-90D, FG-90D-POE,FG-90E, FG-91E, FG-92D, FG-94D-POE, FG-98D-POE, FG-100D, FG-100E, FG-100EF, FG-101E, FG-140D, FG-140D-POE, FG-140E, FG-140-POE, FG-200D, FG-200D-POE, FG-240D, FG-240D-POE, FG-280D-POE, FG-200E, FG-201E, FGT-300D, FGT-300E, FGT-301E, FG-400D, FG-500D, FG-500E, FG-501E, FG-600C, FG-600D, FG-800C, FG-800D, FG-900D, FG-1000C, FG-1000D, FG-1200D, FG-1500D, FG-1500DT, FG-3000D, FG-3100D, FG-3200D, FG-3240C, FG-3600C, FG-3700D, FG-3700DX, FG 3800D, FG-3810D, FG-3815D, FG-3960E, FG3980E, FG-2000E, FG-2500E **FortiGate 5000 Series:** FG-5001C, FG-5001D, FG-5001E, FG-5001E1 **FortiGate 7000 Series:** FG-7030E-Q, FG-7030E-S, FG-7040E-1, FG-7040E-2, FG-7040E-3, FG-7040E-4, FG-7040E-5, FG-7040E-6, FG-7040E-8, FG-7040E-8-DC, FG-7060E-1, FG-7060E-2, FG-7060E-3, FG-7060E-4, FG-7060E-5, FG-7060E-6, FG-7060E-8 **FortiGate DC:** FG-80C-DC, FG-600C-DC, FG-800C-DC, FG-800D-DC, FG-1000C-DC, FG-1500D-DC, FG-3000D-DC, FG-3100D-DC, FG-3200D-DC, FG-3240C-DC, FG-3600C-DC, FG-3700D-DC, FG-3800D-DC, FG-3810D-DC, FG-3815DC **FortiGate Low Encryption:** FG-80C-LENC, FG-100D-LENC, FG-600C-LENC, FG-1000C-LENC **FortiWiFi:** FWF-30D, FWF-30D-POE, FWF-30E, FWF-30E-3G4G-INTL, FWF-30E-3G4G-NAM, FWF-50E, FWF-50E-2R, FWF-51E, FWF-60D, FWF-60D-POE, FWF-60E-DSL, FWF-60E, FWF-61E, FWF-80CM, FWF-81CM, FWF-90D, FWF-90D-POE, FWF-92D **FortiGate VM:** FG-VM, FG-VM64, FG-VM64-AWS, FG-VM64-AWSONDEMAND, FG-VM64-HV, FG-VM64-KVM, FG-VM64-OPC, FG-VM64-XEN, FG-VMX-Service-Manager, FOS-VM64, FOS-VM64-KVM **FortiGate Rugged:** FGR-30D, FGR-30D-ADSL-A, FGR-35D, FGR-60D, FGR-90D	5.4

Model	Firmware Version
FortiGate: FG-20C, FG-20C-ADSL-A, FG-30D, FG-30D-POE, FG-40C, FG-60C, FG-60C-POE, FG-60C-SFP, FG-60D, FG-60D-3G4G-VZW, FG-60D-POE, FG-70D, FG-70D-POE, FG-80C, FG-80CM, FG-80D, FG-90D, FG-90D-POE, FG-92D, FG-94D-POE, FG-98D-POE, FG-100D, FG-110C, FG-111C, FG-140D, FG-140D-POE, FG-140D-POE-T1, FG-200B, FG-200B-POE, FG-200D, FG-200D-POE, FG-240D, FG-240D-POE, FG-280D-POE, FG-300C, FG-300D, FG-310B, FG-311B, FG-400D, FG-500D, FG-600C, FG-600D, FG-620B, FG-621B, FG-800C, FG-800D, FG-900D, FG-1000C, FG-1000D, FG-1200D, FG-1240B, FG-1500D, FG-1500DT, FG-3000D, FG-3016B, FG-3040B, FG-3100D, FG-3140B, FG-3200D, FG-3240C, FG-3600C,FG-3700D, FG-3700DX, FG-3810A, FG-3810D, FG-3815D, FG-3950B, FG-3951B **FortiGate 5000 Series:** FG-5001A, FG-5001A-SW, FG-5001A-LENC, FG-5001A-DW-LENC, FG-5001A-SW-LENC, FG-5001B, FG-5001C, FG-5001D, FG-5101C **FortiGate DC:** FG-80C-DC, FG-300C-DC, FG-310B-DC, FG-600C-DC, FG-620B-DC, FG-621B-DC, FG-800C-DC, FG-800D-DC, FG-1000C-DC, FG-1240B-DC, FG-1500D-DC, FG-3000D-DC, FG-3040B-DC, FG-3100D-DC, FG-3140B-DC, FG-3200D-DC, FG-3240C-DC, FG-3600C-DC, G-3700D-DC, FG-3810A-DC, FG-3810D-DC, FG-3815D-DC, FG-3950B-DC, FG-3951B-DC **FortiGate Low Encryption:** FG-20C-LENC, FG-40C-LENC, FG-60C-LENC, FG-80C-LENC, FG-100D-LENC, FG-200B-LENC, FG-300C-LENC, FG-310B-LENC, FG-600C-LENC, FG-620B-LENC, FG-1000C-LENC, FG-1240B-LENC, FG-3040B-LENC, FG-3140B-LENC, FG-3810A-LENC, FG-3950B-LENC **FortiWiFi:** FWF-20C, FWF-20C-ADSL-A, FWF-30D, FWF-30D-POE, FWF-40C, FWF-60C, FWF-60CM, FWF-60CX-ADSL-A, FWF-60D, FWF-60D-3G4G-VZW, FWF-60D-POE, FWF-80CM, FWF-81CM, FWF-90D, FWF-90D-POE, FWF-92D **FortiGate Rugged:** FGR-60D, FGR-100C **FortiGate VM:** FG-VM, FG-VM64, FG-VM64-AWSONDEMAND, FG-VM-Azure, FG-VM64-HV, FG-VM64-KVM, FG-VM64-XEN **FortiSwitch:** FS-5203B, FCT-5902D	5.2

FortiCarrier Models

Model	Firmware Version
FortiCarrier: FCR-3000D, FCR-3100D, FCR-3200D, FCR-3700D, FCR-3700DX, FCR-3800D, FCR-3810D, FCR-3815D, FCR-5001C, FCR-5001D, FCR-3000D-DC, FCR-3100D-DC, FCR-3200D-DC, FCR-3240C, FCR-3600C, FCR-3700D-DC, FCR-3810D-DC, FCR-5001C **FortiCarrier DC:** FCR-3000D-DC, FCR-3100D-DC, FCR-3200D-DC, FCR-3240C-DC, FCR-3600C-DC, FCR-3700D-DC, FCR-3800D-DC, FCR-3810D-DC, FCR-3815D-DC **FortiCarrier VM:** FCR-VM, FCR-VM64, FCR-VM64-AWS, FCR-VM64-AWSONDEMAND, FCR-VM64-HV, FCR-VM64-KVM	5.4

Model	Firmware Version
FortiCarrier: FCR-3000D, FCR-3100D, FCR-3200D, FCR-3240C, FCR-3600C, FCR-3700D, FCR-3700DX, FCR-3810A, FCR-3810D, FCR-3815D, FCR-3950B, FCR-3951B, FCR-5001A, FCR-5001B, FCR-5001C,FCR-5001D, FCR-5101C, FCR5203B, FCR-5902D **FortiCarrier DC:** FCR-3000D-DC, FCR-3100D-DC, FCR-3200D-DC, FCR-3700D-DC, FCR-3810D-DC **FortiCarrier Low Encryption:** FCR-5001A-DW-LENC **FortiCarrier VM:** FCR-VM, FCR-VM64, FCR-VM64-HV, FCR-VM64-KVM, FCR-Vm64-XEN, FCR-VM64-AWSONDEMAND	5.2

FortiDDoS models

Model	Firmware Version
FortiDDoS: FI-200B, FI400B, FI-600B, FI-800B, FI-900B, FI-1000B, FI-1200B, FI-2000B, FI-3000B	4.2, 4.1, 4.0

FortiAnalyzer models

Model	Firmware Version
FortiAnalyzer: FAZ-200D, FAZ-300D, FAZ-400E, FAZ-1000D, FAZ-1000E, FAZ-2000B, FAZ-3000D, FAZ-3000E, FAZ-3000F, FAZ-3500E, FAZ-3500F, and FAZ-3900E. **FortiAnalyzer VM:** FAZ-VM64, FAZ-VM64-AWS, FMG-VM64-Azure, FAZ-VM64-HV, FAZ-VM64-KVM, and FAZ-VM64-XEN (Citrix XenServer and Open Source Xen).	5.6
FortiAnalyzer: FAZ-200D, FAZ-300D, FAZ-400E, FAZ-1000D, FAZ-1000E, FAZ-2000B, FAZ-2000E, FAZ-3000D, FAZ-3000E, FAZ-3000F, FAZ-3500E, FAZ-3500F, FAZ-3900E, and FAZ-4000B. **FortiAnalyzer VM:** FAZ-VM64, FMG-VM64-Azure, FAZ-VM64-HV, FAZ-VM64-XEN (Citrix XenServer and Open Source Xen), FAZ-VM64-KVM, and FAZ-VM64-AWS.	5.4
FortiAnalyzer: FAZ-100C, FAZ-200D, FAZ-300D, FAZ-400C, FAZ-400E, FAZ-1000C, FAZ-1000D, FAZ-1000E, FAZ-2000B, FAZ-3000D, FAZ-3000E, FAZ-3000F, FAZ-3500E, FAZ-3500F, FAZ-3900E, FAZ-4000B **FortiAnalyzer VM:** FAZ-VM, FAZ-VM-AWS, FAZ-VM64, FAZ-VM64-Azure, FAZ-VM64-HV, FAZ-VM64-KVM, FAZ-VM64-XEN	5.2
FortiAnalyzer: FAZ-100C, FAZ-200D, FAZ-300D, FAZ-400B, FAZ-400C, FAZ-400E, FAZ-1000B, FAZ-1000C, FAZ-1000D, FAZ-1000E, FAZ-2000A, FAZ-2000B, FAZ-3000D, FAZ-3000E, FAZ-3000F, FAZ-3500E, FAZ-3500F, FAZ-4000A, FAZ-4000B **FortiAnalyzer VM:** FAZ-VM, FAZ-VM64, FAZ-VM64-AWS, FAZ-VM64-Azure, FAZ-VM64-HV, FAZ-VM-KVM, FAZ-VM-XEN	5.0

FortiMail models

Model	Firmware Version
FortiMail: FE-60D, FE-200D, FE-200E, FE-400C, FE-400E, FE-1000D, FE-2000B, FE-2000E, FE-3000C, FE-3000D, FE-3000E, FE-3200E, FE-5002B **FortiMail Low Encryption:** FE-3000C-LENC **FortiMail VM:** FE-VM64, FE-VM64-HV, FE-VM64-XEN	5.3.7
FortiMail: FE-60D, FE-200D, FE-200E, FE-400C, FE-400E, FE-1000D, FE-2000B, FE-3000C, FE-3000D, FE-5002B **FortiMail VM:** FE-VM64, FE-VM64-HV, FE-VM64-XEN	5.2.8
FortiMail: FE-100C, FE-200D, FE-200E, FE-400B, FE-400C, FE-400E, FE-1000D, FE-2000B, FE-3000C, FE-3000D, FE-5001A, FE-5002B **FortiMail VM:** FE-VM64	5.1.6
FortiMail: FE-100C, FE-200D, FE-200E, FE-400B, FE-400C, FE-1000D, FE-2000A, FE-2000B, FE-3000C, FE-3000D, FE-4000A, FE-5001A, FE-5002B **FortiMail VM:** FE-VM64	5.0.10

FortiSandbox models

Model	Firmware Version
FortiSandbox: FSA-1000D, FSA-2000E, FSA-3000D, FSA-3000E, FSA-3500D **FortiSandbox VM:** FSA-VM	2.4.0 2.3.2
FortiSandbox: FSA-1000D, FSA-3000D, FSA-3500D **FortiSandbox VM:** FSA-VM	2.2.0 2.1.0
FortiSandbox: FSA-1000D, FSA-3000D **FortiSandbox VM:** FSA-VM	2.0.0 1.4.2
FortiSandbox: FSA-1000D, FSA-3000D	1.4.0 and 1.4.1 1.3.0 1.2.0 and later

FortiSwitch ACTA models

Model	Firmware Version
FortiController: FTCL-5103B, FTCL-5902D, FTCL-5903C, FTCL-5913C	5.2.0
FortiSwitch-ATCA: FS-5003A, FS-5003B **FortiController:** FTCL-5103B, FTCL-5903C, FTCL-5913C	5.0.0
FortiSwitch-ATCA: FS-5003A, FS-5003B	4.3.0 4.2.0

FortiWeb models

Model	Firmware Version
FortiWeb: FWB-2000E	5.6.0
FortiWeb: FWB-100D, FWB-400C, FWB-400D, FWB-1000C, FWB-1000D, FWB-3000C, FWB-3000CFSX, FWB-3000D, FWB-3000DFSX, FWB-3000E, FWB-3010E, FWB-4000C, FWB-4000D, FWB-4000E **FortiWeb VM:** FWB-VM-64, FWB-XENAWS, FWB-XENOPEN, FWB-XENSERVER, FWB-HYPERV, FWB-KVM, FWB-AZURE	5.5.3
FortiWeb: FWB-100D, FWB-400C, FWB-1000C, FWB-3000C, FWB-3000CFSX, FWB-3000D, FWB-3000DFSX, FWB-3000E, FWB-4000C, FWB-4000D, FWB-4000E **FortiWeb VM:** FWB-VM64, FWB-XENAWS, FWB-XENOPEN, FWB-XENSERVER, FWB-HYPERV	5.4.1
FortiWeb: FWB-100D, FWB-400B, FWB-400C, FWB-1000B, FWB-1000C, FWB-1000D, FWB-3000C, FWB-3000CFSX, FWB-3000D, FWB-3000DFSX, FWB-3000E, FWB-4000C, FWB-4000D, FWB-4000E **FortiWeb VM:** FWB-VM64, FWB-XENAWS, FWB-XENOPEN, FWB-XENSERVER, and FWB-HYPERV	5.3.8
FortiWeb: FWB-100D, FWB-400B, FWB-400C, FWB-1000B, FWB-1000C, FWB-1000D, FWB-3000C, FWB-3000CFSX, FWB-3000D, FWB-3000DFSX, FWB-3000E, FWB-4000C, FWB-4000D, FWB-4000E **FortiWeb VM:** FWB-VM64, FWB-HYPERV,FWB-XENAWS, FWB-XENOPEN, FWB-XENSERVER	5.2.4

FortiCache models

Model	Firmware Version
FortiCache: FCH-400C, FCH-400E, FCH-1000C, FCH-1000D, FCH-3000C, FCH-3000D, FCH-3900E **FortiCache VM:** FCH-VM64	4.0

FortiAuthenticator models

Model	Firmware Version
FortiAuthenticator: FAC-200D, FAC-200E, FAC-400C, FAC-400E, FAC-1000C, FAC-1000D, FAC-3000B, FAC-3000D, FAC-3000E, FAC-VM	4.0 and 4.1

Compatibility with FortiOS Versions

This section highlights compatibility issues that administrators should be aware of in 5.6.4.

Compatibility issues with FortiOS 5.6.3

Bug ID	Description
469993	FortiManager has a different default value for switch-controller-dhcp-snooping from that on FortiGate.

Compatibility issues with FortiOS 5.6.0 and 5.6.1

Bug ID	Description
451036	FortiManager may return verification error on `proxy enable` when installing a policy package.
460639	FortiManager may return verification error on `wtp-profile` when creating a new VDOM.

Compatibility issues with FortiOS 5.4.9

Bug ID	Description

486592	FortiManager may report verification failure on the following attributes for RADIUS users:
	`rsso-endpoint-attribute`
	`rsso-endpoint-block-attribute`
	`sso-attribute`

Compatibility issues with FortiOS 5.4.8

Bug ID	Description
469700	FortiManager is missing three wtp-profiles: FAP221E, FAP222E, and FAP223E.

Compatibility issues with FortiOS 5.2.10

The following table lists interoperability issues that have been identified with FortiManager version 5.6.4 and FortiOS 5.2.10.

Bug ID	Description
397220	FortiOS 5.2.10 increased the maximum number of the firewall schedule objects for 1U and 2U+ appliances. As a result, a retrieve may fail if more than the maximum objects are configured.

Compatibility issues with FortiOS 5.2.7

The following table lists interoperability issues that have been identified with FortiManager version 5.6.4 and FortiOS 5.2.7.

Bug ID	Description
365757	Retrieve may fail on LDAP User Group if object filter has more than 511 characters.
365766	Retrieve may fail when there are more than 50 portals within a VDOM.
365782	Install may fail on system global optimize or system fips-cc entropy-token.

Compatibility issues with FortiOS 5.2.6

The following table lists interoperability issues that have been identified with FortiManager version 5.6.4 and FortiOS 5.2.6.

Bug ID	Description
308294	1) New default wtp-profile settings on FOS 5.2.6 cause verification errors during installation. 2) FortiManager only supports 10,000 firewall addresses while FortiOS 5.2.6 supports 20,000 firewall addresses.

Compatibility issues with FortiOS 5.2.1

The following table lists interoperability issues that have been identified with FortiManager version 5.6.4 and FortiOS version 5.2.1.

Bug ID	Description
262584	When creating a VDOM for the first time it fails.
263896	If it contains the certificate: `Fortinet_CA_SSLProxy` or `Fortinet_SSLProxy`, `retrieve` may not work as expected.

Compatibility issues with FortiOS 5.2.0

The following table lists known interoperability issues that have been identified with FortiManager version 5.6.4 and FortiOS version 5.2.0.

Bug ID	Description
262584	When creating a VDOM for the first time it fails.
263949	Installing a VIP with port forwarding and ICMP to a 5.2.0 FortiGate fails.

Bug ID	Description
230199	FortiManager allows the creation of a new FAP-320C WTP profile on a FortiOS 5.0.5 device causing the install to fail. FAP-320C is new for FortiOS 5.0.6.

Bug ID	Description
226064	Attempting to install time zones 79 and 80 fails. These time zones were added in FortiOS 5.0.5.
226078	When the password length is increased to 128 characters, the installation fails.
226098	When installing a new endpoint-control profile, installation verification fails due to default value changes in FortiOS 5.0.5.
226102	If DHCP server is disabled, installation fails due to syntax changes in FortiOS 5.0.5.
226203	Installation of address groups to some FortiGate models may fail due to table size changes. The address group table size was increased in FortiOS 5.0.5.
226236	The `set dedicated-management-cpu enable` and `set user-anonymize enable` CLI commands fail on device install. These commands were added in FortiOS 5.0.5.
230199	FortiManager allows the creation of a new FAP-320C WTP profile on a FortiOS 5.0.4 device causing the install to fail. FAP-320C is new for FortiOS 5.0.6.

Resolved Issues

The following issues have been fixed in 5.6.4. For inquires about a particular bug, please contact Customer Service & Support.

AP Manager

Bug ID	Description
450434	The `wtp-mode` is unset after changing the AP configuration in AP Manager.

Device Manager

Bug ID	Description
463169	`set apn` is not available in device db under `system lte-modem` for FortiWiFi-30E-3G4G-INTI.
478624	Users may fail to add static route to layer 2 VDOM.
479546	After a physical interface being removed from `system.virtual-switch`, it may not be displayed under `system.interface`.
414616	When promoting HA slave, FortiManager can retrieve the new device information from FortiGate but the FortiGate's hostname is not saved in the database.
477009	VM Meter may not show both Master and Slave licensing information in the GUI.

Global ADOM

Bug ID	Description
460002	In Global ADOM, the default Policy Package is in Flow mode while the newly created Policy Packages are in Proxy mode.
470486	Automatic-Install may fail to detect changes to push to ADOMs.

HA

Bug ID	Description
465503	Installation to a FortiGate HA may fail after an HA failover.

Policy and Objects

Bug ID	Description
475594	Users may be not able to create new firewall service custom objects because of the tablesize limit.
456517	`scan-botnet-connections` may be available on FortiManager GUI when `set identity-based enable` is in explicit proxy policy.
477105	The negate function may not refresh GUI.
480723	There may be copy fails when users install a v5.2 policy package to a v5.4 FortiGate.
474058	The merge function may not work with objects containing `/` in their names.
442307	When users try to search for an address object, the address group that includes the address may not show up in the search result.
471187	There may be install validation error due to multiple Forward Domains on Source/Destination interface.
478478	There may be *securityconsole* crash after importing 70k entries of URL filter.
436852	Renaming an used object from Object Selector Pane may cause it to get removed from policies.
474222	Users may fail to create a service objects with subdomain FQDN.
472151	FortiManager may not support an email address with TLD >7 characters in user contact info.
470885	Dynamic mappings may fail to apply to FortiGate accordingly upon installation.
467535	Users may fail to configure with an Application Profile that blocks Proxy Category in Explicit proxy policy.
475072	Objects having conflicts may not be updated correctly when there are mixed values from FortiGate and FortiManager during policy import.
475139	The focus may return to the top of the policy list upon a section title operation.
477676	The displayed sequence number of a policy may change after inline editing.
475497	The list of members of an address group may not be displayed in the editing context.
476567	*Insert Above* and *Insert Below* may not work for IPv4 virtual-wire policy.
480498	The column Destination may randomly disappear under Policy and Objects tab.

Bug ID	Description
370891	FortiManager is missing a column to show last modified time on objects.
442307	FortiManager cannot search for group members when they are not in use.
444671	GUI may hide `logtraffic`-start settings when users check the *No Log* option.
470539	Users may be unable to delete some invalid Web URL filters.
476643	Web GUI sometimes render an empty page for application and IPS signature list.
478915	The minimum height for lower object panel may over-lap with upper panel.
475496	Source addresses, destination addresses and services may not be listed in alphabetical order in the policy list.

Revision History

Bug ID	Description
477295	FortiManager may disable `show-backplane-intf` when users have configured it to be enabled.
480991	Verification may fail when `assign-ip-from usrgrp` is configured in device manager VPN.
486536	Policy package install may fail due to VIP overlap error with FQDN VIP.

Script

Bug ID	Description
442120	Running hundreds of scripts on Remote FortiGate Directly may cause `dmserver` crash.

Services

Bug ID	Description
478294	FortiSandbox devices may fail to get FortiGuard AVDB updates from FortiManager.

System Settings

Bug ID	Description
469142	DST for Mexico City may be incorrect.

Workplace and Workflow

Bug ID	Description
423177	In workspace normal mode, admin users with policy read-write permission may not be able to save changes or unlock policy package.
476205	IPsec p1/p2 proposals are not displayed when Workspace is enabled and ADOM is not locked.

Others

Bug ID	Description
471095	ADOM upgrade may fail with error *Fail(errno=33) : duplicate*.
480577	Upgrade may get stuck because of sslvpn flag upgrade.
477282	Upgrade an ADOM from v5.2 to v5.4 may fail due to changed *wtp-profile* platform types.
460386	Users cannot delete or modify an object when policy package is locked.

Common Vulnerabilities and Exposures

Visit https://fortiguard.com/psirt for more information.

Bug ID	Description
473376	FortiManager5.6.4 is no longer vulnerable to the following CVE References: • CVE-2015-9251

Known Issues

The following issues have been identified in 5.6.4. For inquires about a particular bug or to report a bug, please contact Customer Service & Support.

AP Manager

Bug ID	Description
451160	Changing country code resets most of the configured setting and cloned anomaly.

Device Manager

Bug ID	Description
399893	Device Manager cannot show named address in the router table Destination field.
434101	FortiManager is missing the *Endpoint Control* replacement message in the device configuration and system template.
456821	After a model device is linked to a real device, the VDOM is not displayed.
474241	The reserved management interface should be configurable as the same subnet as another interface.
478444	Policy package status may not change to modified in workflow mode.
485722	IPsec Phase 2 is missing Diffie-Hellman Groups 30, 29, 28, and 27 and GCM encryption algorithms.

Policy & Objects

Bug ID	Description
463920	Address group should highlight the addresses searched.
465620	Intrusion Prevention `log-attack-context` and `rate-mode` are not configurable in Object Configurations.
476639	FortiManager is not able to clone global ADOM objects in local ADOM.

Bug ID	Description
481378	FortiManager should have the same visibility for Youtube Restrict compared to FortiGate.
481991	Central SNAT Policy - NAT checkbox is unchecked all the time.
482033	Policy route table should have same GUI style for the columns: *Name*, *Source* and *Destination*.
482361	After users rename a section, there may be on policy left under the old section name.

Revision History

Bug ID	Description
489169	After upgrade, verification may fail when installing configuration changes related to replacement message and TACACS+ user.
489721	If FortiManager is managing a FortiOS 5.6.4 device and it is upgrading to 5.6.4, there may be a verification failure on `switch-controller-dhcp-snooping` in a subsequent install. **Workaround:** Please perform a retrieve on the device.

Services

Bug ID	Description
478050	When a FortiGate HA cluster uses FortiManager as FDS server it can show duplicate entries in *FortiGuard* > *Package Management* > *Service Status* after a failover.

System Settings

Bug ID	Description
464181	FortiManager sending Authentication Request from a different UDP source port after an incorrect first attempt.
465511	Task Monitor does not give exact status of total and pending tasks when *Automatic Install* is performed from Global ADOM.
480462	FortiManager HA mode flaps when a user adds many admin users from the CLI.
485675	Authentication via TACACS+ may fail when there two or more servers configured.

VPN Manager

Bug ID	Description
478536	When pushing configuration from FortiManager to FortiGate, the outdated VPN should be deleted before creating a new VPN to avoid the *duplicate remote gateway error*.
487098	Random auto-generated PSK may be identical in two separate VPN Manager topologies.

Appendix A - FortiGuard Distribution Servers (FDS)

In order for the FortiManager to request and retrieve updates from FDS, and for FortiManager to serve as a FDS, please configure the necessary settings on all devices between FortiManager and FDS, or between FortiManager and FortiGate devices based on the items listed below:

- FortiManager accesses FDS for antivirus and attack updates through TCP/SSL port 443.
- If there is a proxy server between FortiManager and FDS, FortiManager uses port 80 to communicate with the proxy server by default and connects to the proxy server using HTTP protocol.
- If FortiManager manages a FortiGate device located behind a proxy server, the proxy server permits TCP/SSL traffic to pass through via port 443.

FortiGuard Center update support

You can configure FortiManager as a local FDS to provide FortiGuard updates to other Fortinet devices and agents on your network. The following table lists which updates are available per platform/version:

Platform	Version	Antivirus	AntiSpam	Vulnerability Scan	Software
FortiClient (Windows)	• 5.0.0 and later • 5.2.0 and later • 5.4.0 and later • 5.6.0 and later	✓		✓	
FortiClient (Windows)	• 4.3.0 and later	✓			
FortiClient (Windows)	• 4.2.0 and later	✓	✓		✓
FortiClient (Mac OS X)	• 5.0.1 and later • 5.2.0 and later • 5.4.0 and later • 5.6.0 and later	✓		✓	
FortiMail	• 4.2.0 and later • 4.3.0 and later • 5.0.0 and later • 5.1.0 and later • 5.2.0 and later	✓	✓		
FortiSandbox	• 1.2.0, 1.2.3 • 1.3.0 • 1.4.0 and later	✓			

Platform	Version	Antivirus	AntiSpam	Vulnerability Scan	Software
FortiWeb	• 5.0.6 • 5.1.4 • 5.2.0 and later • 5.3.0	✓			

To enable FortiGuard Center updates for FortiMail version 4.2 enter the following CLI command:

```
config fmupdate support-pre-fgt-43
set status enable
end
```